

Deoiling efficiency for oil extraction from spent bleaching clay and the quality of recovered oil.

ABSTRACT

The disposal and reuse of spent bleaching clay (SBC) from the palm oil processing industry is a problem of growing importance. Although today the only practical way of removing SBC is by disposal, extraction with organic solvents is a well-known method of deoiling contaminated SBC. Various hydrocarbon solvents are used as solvents to extract the residual oil in SBC. In this study, SBC was deoiled by hexane extraction. The content of oil and minor components in SBC was more than 40% by weight. All the extracted oils, irrespective of the solvent used, had poorer quality than crude palm oil (CPO). The outcome of the study showed that the amount of extracted oil using the conventional Soxhlet extraction method was higher than by batch extraction. However, for extraction of the residual SBC using the batch method, a SBC to solvent ratio of 1:7 should be more suitable as more of the impurities are removed. The aim of this study was for a complete separation of the residual oil from SBC. The oil and SBC were analyzed and tested. The results show that SBC still had an activity approximately 80% that of fresh bleaching clay.

Keyword: Spent bleaching clay; Deoiling extraction; Soxhlet extraction; Crude palm oil.